

Patients, Policy and Practice Improvements

## Resident bullying in diagnostic radiology ☆,☆☆,☆☆☆

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## ABSTRACT

**Purpose:** Workplace bullying has been reported in multiple medical specialties outside of diagnostic radiology within the United States. The purpose of this study was to survey diagnostic radiology residents in the United States to determine if: (1) residents had experienced bullying, (2) residents had witnessed bullying of other residents, (3) residents were aware of zero-tolerance policy for workplace bullying at their institution, (4) residents were aware of no retaliation policies for reporting bullying at their institution.

**Materials and methods:** In December 2017, a weekly E-mail for 4 weeks was sent to diagnostic radiology residents in the United States (residents) who had attended the July 2017, September 2017 and October 2017 4-week American Institute for Radiologic Pathology (AIRP) resident course to participate in an online, anonymous, voluntary survey.

**Results:** 28% of radiology resident respondents reported workplace bullying during their residency. One third of radiology residents have witnessed workplace bullying of another radiology resident at their facility. Approximately one half (48%) of respondents did not know if their institution had a zero-tolerance policy for workplace bullying, and approximately one half (55%) of respondents did not know if their institution had a no retaliation policy for reporting workplace bullying.

**Conclusion:** Our survey of diagnostic radiology residents across the United States confirms workplace bullying during residency, and the opportunity for implementation of zero-tolerance and zero retaliation policies for reporting workplace bullying in residency training institutions.

## 1. Introduction

No universal definition of workplace bullying exists, however workplace bullying has been defined and validated in the literature [1,2] as: “Bullying at work involves repeated negative actions and practices that are directed at one or more workers. The behaviors are not welcome to the target and undertaken in circumstances where the target has difficulty in defending him or herself. The behaviors may be carried out as a deliberate act or unconsciously. These behaviors cause humiliation, offence and distress to the target.” The ACR Commission on Human Resources strongly believes that the workplace should be safe and enjoyable for everyone, specifically by supporting in all radiology facilities a zero-tolerance policy for workplace bullying, and a

zero retaliation policy for reporting workplace bullying [3].

Bullying is separate and distinct from harassment which is governed by state laws and is generally defined as “the act of systematic and/or continued unwanted and annoying actions of one party or a group, including threats and demands” [4]. Bullying is also different than the Socratic method of teaching which is defined as “the use of questions, as employed by Socrates, to develop a latent idea, as in the mind of a pupil, or to elicit admissions, as from an opponent, tending to establish a proposition” [5]. The Socratic Method is a useful educational technique and the ACR Commission on Human Resources continues to support the use of the Socratic method of teaching in Diagnostic Radiology Residency programs.

In a survey of United States residents and fellows from across 16

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different residency specialties, including Diagnostic Radiology, and 9 different internal medicine fellowships, 48% of respondents reported bullying in the year preceding the survey [6]. Limited studies have been done looking at bullying in individual medical specialties in the US. A study evaluating bullying in family medicine found that 30% of the family medicine physicians had been personally bullied in the workplace [7]. However, as discussed in a 2017 JACR article by the ACR Commission on Human Resources, no studies are available that specifically address workplace bullying in Diagnostic Radiology Residency programs [3].

The purpose of this study was to survey Diagnostic Radiology residents in the United States to determine the scope of bullying: (1) residents had experienced bullying, (2) residents had witnessed bullying of other residents, (3) residents were aware of zero-tolerance policy for workplace bullying at their institution, (4) residents were aware of no retaliation policies for reporting bullying at their institution.

## 2. Materials and methods

Approval from the American College of Radiology was obtained prior to beginning the project. In December 2017, an e-mail was sent to Diagnostic Radiology residents in the United States (residents) who had attended the July 2017, September 2017 and October 2017 4-week American Institute for Radiologic Pathology (AIRP) resident course to participate in an online, anonymous, voluntary survey. The survey was administered at [surveymonkey.com](http://surveymonkey.com) and was composed of 12 questions and 7 demographic questions (Appendix 1). Survey participants were not required to answer all questions. Survey responses were collected for a period of 4 weeks with weekly reminder emails. Descriptive statistics were calculated from the collected data.

## 3. Results

The survey was sent to 687 residents, or 14.4% (687/4769) of all US diagnostic radiology residents [8]. A total of 176 residents responded, for a response rate of 25.6% (176/687), or 3.7% (176/4769) of all US residents. Gender and race distribution in the respondents was similar to gender and race distribution among all US residents: for example, 69% (79/114) of respondents were male, compared to 74% of all residents being male [8]. The majority of the respondents (73/112; 65%) were in the third year of residency (Table 1).

In response to the questions about bullying, 27.8% of respondents (49/176) answered yes to being personally bullied during their Diagnostic Radiology Residency (question 1; Fig. 1) and 33.3% (43/129) answered yes to having witnessed bullying during their Diagnostic Radiology Residency (question 7; Fig. 2). Responses to the other questions about personal and witnessed bullying are summarized in Tables 2 and 3, respectively. Twenty of 36 respondents (55.6%) indicated that the personal bullying began in their first year (question 2), and 13 of 36 respondents (36.1%) indicated being personally bullied more than 10 times (question 3).

A minority of respondents reported personal bullying (question 4) (10/36; 27.8%) or witnessed bullying (question 8) (6/44; 13.6%). The most common reason for not reporting personal bullying was fear of retaliation (question 6) (17/26; 65.4%). The reasons for not reporting witnessed bullying (question 10) were fairly evenly split among fear of retaliation (14/37; 37.8%), fear of being stigmatized (12/37; 32.4%), and other (11/37; 29.7%). The Program Director was the person bullying was most commonly reported to (5/9 [55.6%] for personal bullying [question 5] and 3/5 [60%] for witnessed bullying [question 9]).

Approximately half of the respondents (58/121; 48%) answered that they did not know if their facility had a zero-tolerance policy for bullying (question 11 and Fig. 3), and slightly more than half (66/120; 55%) answered that they did not know if their facility had a no-retaliation policy for reporting bullying (question 12 and Fig. 4).

**Table 1**  
Demographic results

		Survey results	Overall diagnostic radiology residents [8]
Year of radiology residency	First	0 (0%)	
	Second	1 (1%)	
	Third	73 (65%)	
	Fourth	34 (30%)	
	Fifth	4 (4%)	
	Total	112	
Number of residents in program	1–5	3 (3%)	
	6–10	3 (3%)	
	11–20	38 (34%)	
	21–30	21 (19%)	
	31–40	25 (22%)	
	41–50	12 (11%)	
	51 or more	11 (10%)	
	Total	113	
Age	25 and under	0 (0%)	
	26–30	56 (50%)	
	31–35	46 (41%)	
	36–40	8 (7%)	
	41 and over	3 (2%)	
	Total	113	
Gender	Male	79 (69%)	74%
	Female	34 (30%)	26%
	Other	1 (1%)	
	Total	114	
Race	White	68 (61%)	52%
	Black	7 (6%)	3%
	Native American	0 (0%)	Less than 1%
	Asian	28 (25%)	20%
	Pacific Islander	0 (0%)	
	Other	9 (8%)	5%
	Total	112	
Ethnicity	Hispanic	4 (4%)	4%
	Non-Hispanic	83 (74%)	
	Other	25 (22%)	
	Total	112	
Geographic location of residency program	Mid Atlantic	31	
	Midwest	32	
	New England	11	
	South	17	
	Southwest	9	
	West	13	
	Total	113	

## 4. Discussion

The purpose of this study was to examine the scope of bullying among diagnostic radiology residents in the US and their awareness of institutional policies related to bullying. Survey results indicating a 27.8% rate of bullying in US Diagnostic Radiology Residents are in line with other studies showing a 30–48% rate of bullying in US medical residencies [6,7]. Our demographic data indicate that our participant pool is representative of US Diagnostic Radiology residents in terms of gender, race and ethnicity [8,9].

Our study shows an inverse relationship between year of residency and likelihood of being bullied. Of those reported being bullied, over half [55.6%] reported being bullied during their first year of residency training. This was followed by 33.3% in the second year, 8.3% in the third year and 2.8% in the fourth year. Hierarchical differences between employees is a known underlying factor to contribute to workplace bullying, making junior residents more vulnerable to workplace bullying than senior residents [10–12].

Over one third (36.1%) of residents who reported being bullied were bullied over 10 times during their residency. These findings are consistent with the definition of bullying involving repeated negative actions and practices that are directed to the individual where the target has difficulty in defending himself or herself [13].

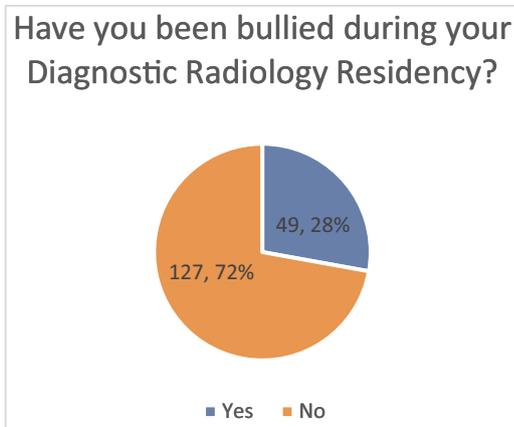


Fig. 1. Responses to question 1. Number of responses, percentages shown in pie chart.

Table 3

Results to questions on witnessed bullying (questions 8–10)

Did you report the witnessed bullying?	Yes	6	13.6%
	No	38	86.4%
Total		44	
To whom did you first report the bullying?	Department Chair	0	0.00%
	Program Director	3	60.0%
	Other Faculty	0	0.00%
	Chief Resident	1	20.0%
	Other	1	20.0%
	Total	5	
What was the main reason you did not report the witnessed bullying?	Fear of retaliation	14	37.8%
	Fear of being stigmatized	12	32.4%
	Maintain popularity	0	0.00%
	Other	11	29.7%
	Total	37	

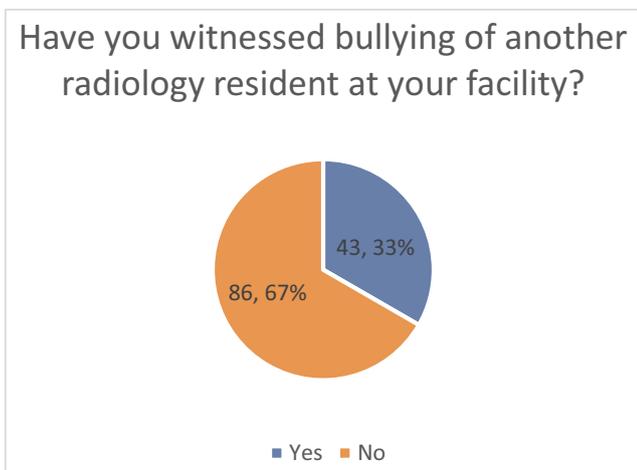


Fig. 2. Responses to question 7. Number of responses, percentages shown in pie chart.

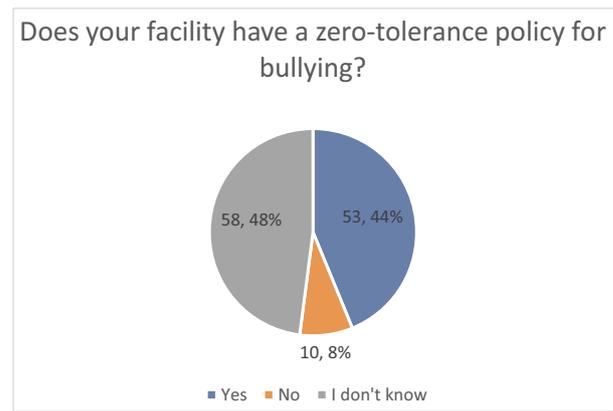


Fig. 3. Responses to question 11. Number of responses, percentages shown in pie chart.

Table 2

Results to questions on personal bullying (questions 2–6)

During what year was the first episode of bullying?	1st	20	55.6%
	2nd	12	33.3%
	3rd	3	8.3%
	4th	1	2.8%
	Total	36	
How many times have you been bullied during your residency?	Once	3	8.3%
	Twice	5	13.9%
	3–5	10	27.8%
	6–10	5	13.9%
	Over 10	13	36.1%
Total		36	
Did you report the bullying?	Yes	10	27.8%
	No	26	72.2%
	Total	36	
To whom did you first report the bullying?	Department Chair	0	0.00%
	Program Director	5	55.6%
	Chief Resident	2	22.2%
	Other	2	22.2%
	Total	9	
What is the main reason you did not report the bullying?	Fear of retaliation	17	65.4%
	Fear of being stigmatized	4	15.4%
	Maintain popularity	0	0.00%
	Other	5	19.2%
	Total	26	



Fig. 4. Responses to question 12. Number of responses, percentages shown in pie chart.

Over two-thirds (72.2%) of residents did not report their bullying, with the main reason (65.4%) being fear of retaliation, which has also been shown to be the primary reason for non-reporting of bullying behavior in other studies [11,14]. Bullying was most often by victims to the program director, (55.6% of the time), followed by other faculty or the chief resident. Program directors of radiology residencies, in their roles as leaders, play a significant role in setting the tone for the program for residents to feel safe to be able to report their bullying [15,16]. If residents feel comfortable that they have a program director in their corner and advocating for their safety, they are more likely to report the

bullying to the program director. Specific leadership training for program directors of Diagnostic Radiology to help establish early transparent communication and create cultures of safety for Radiology trainees would likely help overcome some of the perceived obstacles by residents [17,18].

Our results similarly demonstrate underreporting of bullying by residents when affecting their peers, with 86.4% of witnessing residents not report the bullying. The primary reason for not reporting witnessed bullying was fear of retaliation (37.8%) with fear of being stigmatized a close second at 32.4%. When bullying was witnessed and reported, the program director was the person notified in 60% of the cases. Again, program directors of Radiology can help establish the tone for the entire program for residents to feel safe and secure to be able to report their bullying or witnessed bullying behaviors [15,16,19]. If residents are comfortable that the program director is advocating for the safety of their colleagues and themselves, they are more likely going to report the bullying to the program director. The potential importance and benefit of specific leadership training for program directors is again inherently underscored [15,16].

Leadership of institutions that provide training for Diagnostic Radiology residents have an inherent responsibility to provide a culture of safety for trainees by establishing appropriate policies. The ACR HR commission supports a zero-tolerance policy for workplace bullying in diagnostic radiology. Of surveyed residents, only 43.8% stated that their facility had a zero-tolerance policy for bullying, with additional 47.9% not knowing if their institution had any kind of policy. The ACR HR commission also supports maintenance of a protection from retaliation policy for individuals who report bullying. Only 38.3% of surveyed residents stated that their facility had a no retaliation policy for reporting bullying, with an additional 55% not sure if their institution had any such policy. Policies that are implemented to create this culture can only be effective if trainees are made aware of them. This survey identifies opportunities for institutional policymakers in residency training to implement zero-tolerance policies for bullying and zero retaliation policies for reporting workplace bullying in order to help reduce workplace bullying. [17–22] Further, education about the existence of these policies is imperative if they are to help define a culture that does not accept workplace bullying.

There are strengths to this study. To our knowledge, this is the first formal investigation of the prevalence of workplace bullying affecting residents in Diagnostic Radiology, and their awareness of zero-tolerance policies of bullying and no retaliation policies of reporting bullying. Compared to other anonymous, voluntary web-based surveys of physicians, our response rate was relatively high [23–25]. Our demographic analysis shows that the survey was reflective of the demography of diagnostic radiology residents within the United States in terms of gender, race and ethnicity, therefore potentially reducing bias. We clearly defined bullying at the outset of the survey to help avoid confusion with harassment, and to gain consistency. We were also able to investigate the amount of resident knowledge regarding zero-tolerance policies at their academic institutions, gaining valuable insight into opportunities to improve implementation and education regarding such future policies.

There are limitations to this study as well. We did not specifically investigate who the bully was to the victims. This could be faculty, fellows, senior residents, managers, technologists, or others in the workplace. When designing the survey, we tried to balance the survey length to gain maximal information within a minimal amount of questions to help avoid survey fatigue. While we did achieve a higher response rate, and confirmed that bullying does exist during residency, future research is encouraged to help identify the source(s) of bullying, which could be attending physicians, residents, technologists or managers, based on other studies [11]. Another limitation was the inability to survey residents throughout all years of residency since most Diagnostic Radiology residents attend the 4-week AIRP resident course

during the 2nd or 3rd year of Diagnostic Radiology residency.

Our primary goal in performing this study was to determine the scope of workplace bullying in diagnostic radiology residency programs within the United States. Documenting workplace bullying and raising awareness is the first step to combatting this issue. Our sincere hope is that this survey will stimulate future investigations of bullying within diagnostic radiology with the hopes of 1) bringing light to this important and pervasive issue and 2) encouraging implementation of policies to reduce bullying in diagnostic radiology.

## 5. Conclusion

Our survey of diagnostic radiology residents across the United States confirms workplace bullying during residency, with 28% of respondents reporting workplace bullying during their residency, and one third of respondents having witnessed workplace bullying of another resident. Approximately one half (48%) of respondents did not know if their institution had a zero-tolerance policy for workplace bullying, and approximately one half (55%) of respondents did not know if their institution had a no retaliation policy for reporting workplace bullying. There is an opportunity for implementation of zero-tolerance and no retaliation policies for reporting workplace bullying in residency training institutions.

## Acknowledgments

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## Appendix 1. US diagnostic radiology resident survey

1. Bullying at work involves repeated negative actions and practices that are directed at one or more workers. The behaviors are unwelcome to the target and undertaken in circumstances where the target has difficulty in defending him or herself. The behaviors may be carried out as a deliberate act or unconsciously. These behaviors cause humiliation, offense and distress to the target. Using this definition of bullying, have you been bullied during your Diagnostic Radiology Residency?

- a. Yes
- b. No

2. (If answer to 1 was a) During what year of Diagnostic Radiology Residency was the first episode of bullying?

- a. 1st
- b. 2nd
- c. 3rd
- d. 4th

3. (If answer to 1 was a) How many times have you been bullied during your residency?

- a. Once
- b. b Twice
- c. 3–5
- d. 6–10
- e. Over 10

4. (If answer to 1 was a) Did you report the bullying?

- a. Yes
- b. No

5. (If answer to 4 was a) To whom did you first report the bullying?
- Department Chair
  - Program Director
  - Other Faculty
  - Chief Resident
  - Other
6. (If answer to 4 was b) What is the main reason you did not report the bullying?
- Fear of retaliation
  - Fear of being stigmatized
  - Maintain popularity
  - Other
7. Have you witnessed bullying of another radiology resident at your facility?
- Yes
  - No
8. (If answer to 7 was a) Did you report the witnessed bullying?
- Yes
  - No
9. (If answer to 8 was a) To whom did you first report the bullying?
- Department Chair
  - Program Director
  - Other Faculty
  - Chief Resident
  - Other
10. (If answer to 8 was b) What was the main reason you did not report the witnessed bullying?
- Fear of retaliation
  - Fear of being stigmatized
  - Maintain popularity
  - Other
11. Does your facility have a zero-tolerance policy for bullying?
- Yes
  - No
  - I don't know
12. Does your facility have a no retaliation policy for reporting bullying?
- Yes
  - No
  - I don't know
13. What year Diagnostic Radiology Resident are you?
- First
  - Second
  - Third
  - Fourth
  - Fifth
14. How many radiology residents are being currently being trained at your institution?
- 1–5
  - 6–10
  - 11–20
  - 21–30
  - 31–40
  - 41–50
  - 51 or more
15. What is your age?
- 25 and under
  - 26–30
  - 31–35
  - 36–40
  - 41 and over
16. What is your gender?
- Male
  - Female
  - Other
17. What is your race?
- White – A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.
  - Black or African American – A person having origins in any of the Black racial groups of Africa.
  - American Indian or Alaska Native – A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment.
  - Asian – A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
  - Hawaiian – Native Hawaiian or Other Pacific Islander – A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
  - Other
18. What is your ethnicity?
- Hispanic, Latino, or Spanish Origin – A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race.
  - Not Hispanic, Latino, or Spanish origin
  - Other
19. What part of the country are you doing your diagnostic radiology residency?
- Mid-Atlantic (DE, MD, NJ, NY, PA)
  - Midwest (IN, IL, MI, OH, WI, IA, KS, MN, ND, SD)
  - New England (CT, ME, MA, NH, RI, VT)
  - South (FL, GA, NC, SC, AL, KY, MS, TN, AR, LA, DC, VA, WV, MO)
  - Southwest (AZ, NM, OK, TX)
  - West (CO, ID, MT, UT, NV, WY, AK, CA, HI, OR, WA, NE)
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